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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/501,398	07/15/2004	Tadao Nakaya	NFA-0205	2779

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EXAMINER

HABTE, KAHSAY

ART UNIT PAPER NUMBER

1624

DATE MAILED: 02/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/501,398

Applicant(s)

NAKAYA ET AL.

Examiner

Kahsay Habte

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 January 2006.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 6, 8-10 and 28 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 6, 8-10 and 28 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☒ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. Claims 6, 8-10 and 28 are pending in this application.

### ***Response to Amendment***

2. Applicant's amendment filed 1/23/2005 in response to the previous Office Action (9/23/2005) is acknowledged. Rejections of claims 6 and 8-10 under 35 U.S.C. 103 (a) and 35 U.S.C. § 112, first paragraph (items 4 and 6) have been obviated. The prior art rejection of claim 28 under 102(b) rejection has been maintained. Even though applicants overcome most of the rejections, applicant's amendment also raises new issues that need further rejection.

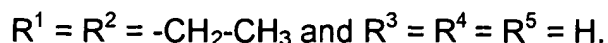
### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 28 is rejected under 35 U.S.C. 102(b) as being anticipated by Mann et al. (Journal f. Prakt. Chemie., 1981, Vol. 323, No. 5, pages 785-792). Cited reference discloses a compound of interest: 9-(diethylamino)-5H-Benzo[a]phenothiazine-5-one at page 788 (see Table 1, compound 1). Said compound of interest is the same as applicants when applicant's formula (10) has the following substituents:



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The examiner has attached an English translation of said reference for applicant's convenience.

Note that the claim limitation "wherein said Nile red luminescent compound is in an energized state to emit red light" is presumed to be present in the prior art, since some molecules of the dye are always present in an energized state.

Since said compound is the same as applicants, the 102(b) rejection is proper.

### ***Response to arguments***

Applicant's argument filed 1/23/2006 has been fully considered but it is not persuasive.

Applicants have simply changed the label from "is in an energized state to emit red light" to "emits red light upon application of electric energy". Note that the new label does not change the scope of the compound. It is recommended that applicants delete this claim.

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 6 and 8-10 and 28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention:

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a. In claim 6, the phrase " $R^3$  forms  $-\text{CH}_2-\text{CH}_2-\text{CR}^6\text{R}^7-$  with  $R^1$  or forms with  $R^4$  a naphthalene ring including as a part thereof the benzene moiety of the formula (10);  $R^4$  forms with  $R^3$  forms a naphthalene ring including as a part thereof the benzene moiety of the formula (10)" is not clear. Note that  $R^1$  is permitted only to form  $-\text{CH}_2-\text{CH}_2-\text{CR}^6\text{R}^7-$  together with  $R^3$ , but  $R^3$  also forms with  $R^4$  a naphthalene ring. How can  $R^3$  form a ring with variables  $R^1$  and  $R^4$ ? Since applicants deleted the definition of  $R^1 =$  hydrogen or alkyl, there is only one definition for  $R^1$  (i.e.  $R^1$  forms  $-\text{CH}_2-\text{CH}_2-\text{CR}^6\text{R}^7-$  together with  $R^3$ ). Thus, it is unclear what the definition of  $R^1$  is, when  $R^4$  and  $R^3$  together form a naphtho ring? It is recommended that applicants review the definitions of variables  $R^1$ ,  $R^3$  and  $R^4$ .

b. In claim 6, the phrase " $R^1$  forms  $-\text{CH}_2-\text{CH}_2-\text{CR}^6\text{R}^7-$  together with  $R^3 \dots \dots R^3$  forms  $-\text{CH}_2-\text{CH}_2-\text{CR}^6\text{R}^7-$  with  $R^1$ " is not clear. There are two same definitions for variables  $R^1$  and  $R^3$ . It is recommended that applicants delete one of the definitions.

c. Regarding claims 6, 9-10 and 28, the term "including" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

d. In claim 8, the phrase "each of  $R^1$  and  $R^2$  is hydrogen atom" is improperly dependent on claim 6. There is no definition that permit "each of  $R^1$  and  $R^2$  is hydrogen atom" in claim 6. Applicants have deleted  $R^1 = R^2 = \text{H}$  from claim 6.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

### ***Conclusion***

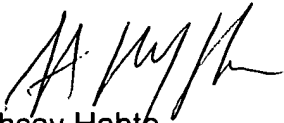
5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kahsay Habte, Ph. D. whose telephone number is (571) 272-0667. The examiner can normally be reached on M-F (9.00AM- 5:30PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Wilson (Acting SPE) can be reached at (571) 272-0661. The fax

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phone number for the organization where this application or proceeding is assigned is (571)-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kahsay Habte  
Primary Examiner  
Art Unit 1624

KH  
February 13, 2006